

IN THE CLAIMS:

1. (cancelled)
2. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said at least one electrically conductive connecting element is on the substrate and at least one resilient socket is on the circuit device.
3. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said at least one electrically conductive connecting element comprises a pin projecting from a surface of the substrate or circuit device.
4. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said at least two resilient members comprise opposed spring fingers electrically connected to the substrate or the circuit device.
5. (original) An assembly as set forth in claim 4 wherein said spring fingers have inturned free end portions which form an opening for receiving said at least one electrically conductive connecting element.
6. (original) An assembly as set forth in claim 5 wherein said spring fingers are C-shaped.
7. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said at least one electrically conductive connecting element has a body with an axial length extending from a first end of the connecting element connected to the substrate or circuit device to a second free end.

8. (original) An assembly as set forth in claim 7 wherein the body of said at least one electrically conductive connecting element is headless.

9. (original) An assembly as set forth in claim 8 wherein said body is cylindric and of substantially uniform diameter throughout the axial length of the connecting element.

10. (original) An assembly as set forth in claim 7 wherein said body comprises at least one shoulder that engages the resilient members of the socket to provide an interlocking force supplementing the biasing force of the resilient members to hold the circuit device and the substrate in electrical contact.

11. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said at least one electrically conductive connecting element comprises a stud bump made from metal deposited on the electrical connection pad of the substrate or circuit device.

12. (original) An assembly as set forth in claim 11 wherein said metal is gold.

13. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said at least one electrically conductive connecting element comprises a solder ball.

14. (currently amended) An assembly as set forth in claim [[1]] 36 further comprising a bonding agent on either of the electrically conductive connecting element or the socket to strengthen the electrical and mechanical connection between the connecting element and the socket.

15. (original) An assembly as set forth in claim 14 wherein said bonding agent is a solder alloy.

16. (original) An assembly as set forth in claim 14 wherein said bonding agent is a conductive adhesive.

17. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said integrated circuit device is a MEMS device.

18. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said integrated circuit device is a chip scale package.

19. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said integrated circuit device is an optoelectronic device.

20. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said substrate is a test substrate for performing testing of the integrated circuit device.

21. (currently amended) An assembly as set forth in claim [[1]] 36 wherein said substrate is a printed circuit board for an electronic device.

22. (cancelled)

23. (currently amended) An assembly as set forth in claim [[22]] 37 wherein said electrical conductive connecting element comprises a pin projecting from a surface of the substrate or the circuit device.

24. (currently amended) An assembly as set forth in claim [[22]] 37 wherein said socket comprises at least two resilient

members biased against said connecting element so that the circuit device and the substrate are held in electrical and mechanical connection by the biasing force of the resilient members against the connecting element.

25. (currently amended) An assembly as set forth in claim 24 wherein said at least two resilient members comprise opposed spring fingers electrically connected to the substrate or the circuit device, the spring fingers having inturned free end portions forming an opening for receiving said at least one electrically conductive connecting element.

26. (cancelled)

27. (currently amended) An assembly as set forth in claim [[26]] 38 wherein said electrical conductive connecting element comprises a stud bump projecting from a surface of the substrate or the circuit device.

28. (original) An assembly as set forth in claim 27 wherein said stud bump comprises metal deposited on an electrical connection pad of the substrate or the circuit device.

29. (currently amended) An assembly as set forth in claim [[26]] 38 wherein said socket comprises at least two resilient members biased against said at least one connecting element so that the circuit device and the substrate are held in electrical and mechanical connection by the biasing force of the resilient members against the connecting element.

30. (original) An assembly as set forth in claim 29 wherein said at least two resilient members comprise opposed spring fingers electrically connected to the substrate or the circuit device, the spring fingers having inturned free end portions

forming an opening for receiving said at least one electrically conductive connecting element.

31. (cancelled)

32. (currently amended) An assembly as set forth in claim [[31]] 39 wherein said socket comprises at least two resilient members biased against said connecting element so that the circuit device and the substrate are held in electrical and mechanical connection by the biasing force of the resilient members against the connecting element.

33. (original) An assembly as set forth in claim 32 wherein said at least two resilient members comprise opposed spring fingers electrically connected to the substrate or the circuit device, the spring fingers having inturned free end portions forming an opening for receiving said at least one electrically conductive connecting element.

34. (currently amended) An assembly as set forth in claim [[31]] 39 wherein said conductive ball comprises a solder sphere.

35. (currently amended) An assembly as set forth in claim [[31]] 39 wherein said conductive ball comprises a conductive adhesive.

36. (new) An electrical circuit assembly, comprising
a substrate having a first electrical connection pad,
an integrated circuit device having a second electrical
connection pad,

at least one electrically conductive connecting element
attached to one of said first and second connection pads prior to
assembly of the substrate and the integrated circuit device,

at least one socket comprising at least two resilient members attached to the other of said first and second connection pads prior to assembly of the substrate and the integrated circuit device,

said at least one socket being adapted to receive said at least one electrically conductive connecting element when the substrate and integrated circuit device are assembled such that the at least two resilient members of the socket exert a biasing force against said at least one electrically conductive connecting element to hold the substrate and integrated circuit device in electrical and mechanical connection without the need for a connector separate from the substrate and integrated circuit device, said assembly being free of any containment structure between the substrate and the integrated circuit device surrounding the at least two resilient members.

37. (new) An electrical circuit assembly, comprising a substrate having a first electrical connection pad, an integrated circuit device having a second electrical connection pad,

at least one socket attached to one of said first and second connection pads prior to assembly of the substrate and the integrated circuit device,

at least one electrically conductive connecting element attached to the other of said first and second connection pads prior to assembly of the substrate and the integrated circuit device, the connecting element comprising a body having a headless free end,

said at least one electrically conductive connecting element being received in said at least one socket when the substrate and integrated circuit device are assembled such that the socket exerts a biasing force against said body to hold the substrate and integrated circuit device in electrical and mechanical connection without the need for a connector separate from the

substrate and integrated circuit device, said assembly being free of any containment structure between the substrate and the integrated circuit device surrounding the at least one socket.

38. (new) An electrical circuit assembly, comprising
a substrate having a first electrical connection pad,
an integrated circuit device having a second electrical
connection pad,

at least one socket directly attached to one of said first
and second connection pads prior to assembly of the substrate and
the integrated circuit device,

at least one electrically conductive connecting element
attached to the other of said first and second connection pads
prior to assembly of the substrate and the integrated circuit
device, the connecting element comprising a body having an axial
surface and at least one shoulder extending from the axial
surface,

said at least one electrically conductive connecting element
being received in said at least one socket when the substrate and
integrated circuit device are assembled such that the socket
exerts a biasing force against said at least one shoulder to hold
the substrate and integrated circuit device in electrical and
mechanical connection without the need for a connector separate
from the substrate and integrated circuit device, said assembly
being free of any containment structure between the substrate and
the integrated circuit device surrounding the at least one
socket.

39. (new) An electrical circuit assembly, comprising
a substrate having a first electrical connection pad,
an integrated circuit device having a second electrical
connection pad,

at least one socket attached to one of said first and second connection pads prior to assembly of the substrate and the integrated circuit device,

at least one electrically conductive connecting element attached to the other of said first and second connection pads prior to assembly of the substrate and the integrated circuit device, the connecting element comprising a conductive sphere deposited on the other of said first and second connection pads,

said conductive sphere being received in said socket when the substrate and integrated circuit device are assembled such that the at least one socket exerts a biasing force against said conductive sphere to hold the substrate and integrated circuit device in electrical and mechanical connection without the need for a connector separate from the substrate and integrated circuit device, said assembly being free of any containment structure between the substrate and the integrated circuit device surrounding the at least one socket.

40. (new) An electrical circuit assembly comprising
a substrate,
an integrated circuit device electrically and mechanically connected to the substrate,

at least one electrically conductive connecting element on the substrate,

at least one socket on the circuit device for receiving said at least one connecting element, said socket comprising at least two resilient members biased against said connecting element so that the circuit device and the substrate are held in electrical and mechanical connection by the biasing force of the resilient members against the connecting element.

41. (new) An electrical circuit assembly, comprising
a substrate having a first electrical connection pad with a connection surface,

an integrated circuit device having a second electrical connection pad with a connection surface,

at least one electrically conductive connecting element non-releasably attached to the connection surface of one of said first and second connection pads prior to assembly of the substrate and the integrated circuit device,

at least one socket comprising at least two resilient members having pad connection portions directly and non-releasably attached to the connection surface of the other of said first and second connection pads prior to assembly of the substrate and the integrated circuit device, said pad connection portions extending generally parallel to said connection surface of the other of said first and second connection pads and being attached in face-to-face contact with said connection surface,

said at least one socket being adapted to receive said at least one electrically conductive connecting element when the substrate and integrated circuit device are assembled such that the at least two resilient members of the socket exert a biasing force against said at least one electrically conductive connecting element to hold the substrate and integrated circuit device in electrical and mechanical connection.

42. (new) An assembly as set forth in claim 41 wherein each of said at least two resilient members is formed from a flat metal strip.

43. (new) An assembly as set forth in claim 42 wherein said flat metal strip is bent generally into the shape of a C.

44. (new) An assembly as set forth in claim 43 wherein said at least two resilient members have inturned free end portions which form an opening for receiving said at least one electrically conductive connecting element.